

What Is Claimed Is:

1. A composition for screening antihypertensive drug, which contain a mammalian TCTP gene.

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2. The composition of Claim 1, wherein the TCTP gene has either a base sequence of SEQ ID NO: 1 or a base sequence having one or more disruption, deletion, insertion, point, substitution, nonsense, missense, polymorphism or rearrangement mutations in the base sequence of SEQ ID NO: 1.

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3. A composition for screening antihypertensive drug, which contain a mammalian TCTP protein.

4. The composition of Claim 3, wherein the TCTP gene has either an amino acid sequence of SEQ ID NO: 2 or is a polypeptide fragment which can be expressed from a gene of a base sequence having one or more disruption, deletion, insertion, point, substitution, nonsense, missense, polymorphism or rearrangement mutations in the base sequence of SEQ ID NO: 1 and shows physiological activity equal to that of TCTP.

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5. A method for screening antihypertensive drugs, which uses the composition of Claim 1 or 2 as a target substance.

6. The method of Claim 5, which comprises the steps of: contacting the composition with a test substance; and examining the reaction between the

composition and the test substance so as to determine if the test substance shows the activity to inhibit the expression of the gene.

7. A method for screening antihypertensive drugs, which uses the
5 composition of Claim 3 or 4 as a target substance.

8. The method of Claim 7, which comprises the steps of: contacting the composition with a test substance; and examining the reaction between the composition and the test substance so as to determine if the test substance shows the
10 activity to inhibit the expression of the gene.

9. The method of Claim 8, which uses a method of measuring the activity of the TCTP gene or protein after reacting the TCTP gene or protein with the test substance; a yeast two-hybrid method; screening of a phage-displayed peptide clone
15 binding to the TCTP protein; high throughput screening (HTS) using natural and chemical library; drug hit HTS; cell-based screening; or a screening method using a DNA array.

10. Transgenic mice which contain mammalian TCTP gene at somatic and
20 generative cells by the introduction of the mammalian TCTP gene at the embryonic stage, and thus show phenotypes of hypertension and heart hypertrophy by the overexpression of a TCTP protein from the TCTP gene.

11. The transgenic mice of Claim 10, wherein the TCTP gene has either a
25 base sequence of SEQ ID NO: 1 or a base sequence having one or more disruption,

deletion, insertion, point, substitution, nonsense, missense, polymorphism or rearrangement mutations in the base sequence of SEQ ID NO: 1.

12. The transgenic mice of Claim 11, wherein the TCTP gene is inserted into
5 a vector DNA containing a cytomegalovirus enhancer (CMV-IE), a chicken beta-actin promoter and a rabbit beta-globin poly A-tail.

13. The transgenic mice of Claim 12, wherein the embryos of the transgenic mice are deposited under accession number KCTC 10640BP.

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14. A method for producing TCTP-overexpressing transgenic mice, the method comprising the steps of:

- 1) inserting a mammalian TCTP gene into a transformation vector to produce a recombinant gene construct for transformation;
- 15 2) microinjecting the recombinant gene construct from the step 1) into the male pronucleus of the embryo of a mouse;
- 3) implanting the microinjected embryo into a surrogate mother mouse; and
- 4) selecting TCTP-overexpressing transgenic mice from the progeny of the surrogate mother mouse, by confirming that the transgenic mice have the TCTP gene
20 inserted into a genomic DNA, express a TCTP protein and show a phenotype of hypertension or heart hypertrophy.

15. The method of Claim 14, wherein the TCTP gene has either a base sequence of SEQ ID NO: 1 or a base sequence having one or more disruption,
25 deletion, insertion, point, substitution, nonsense, missense, polymorphism or

rearrangement mutations in the base sequence of SEQ ID NO: 1.

16. A method for screening antihypertensive drugs, which comprises the steps of: administering test substances to the transgenic mice of any one of Claims 10
5 to 13; observing the extent of improvement of hypertension and heart hypertrophy symptoms in the animals; and screening test substances showing the improvement.